Specification

Rollers of an Inking or Dampening System, as well as an Inking or Dampening System with two Rollers Acting Together in the Print-on Position

The invention relates to a roller of an inking or dampening system in accordance with the preamble of claim 1 or 6 or 15.

DE 197 20 954 A1 discloses a printing group with a vibrator inking system having three distribution cylinders and a dampening system having one distribution cylinder. The ink flow takes place starting at a distribution cylinder of the inking system remote from the cylinder, respectively via an inking roller parallel to two distribution cylinders closer to the transfer cylinder, and from there via respectively assigned application rollers to the transfer cylinder. The three-roller dampening system is always in active contact with one of the inking system distributors, so that a dampening agent/ink emulsion is applied.

A film inking system having three distribution cylinders is known from DE 197 50 960 A1, wherein the ink flow takes place from a distribution cylinder remote from the cylinder to a second distribution cylinder, and from there parallel via application rollers to the forme cylinder and the third distribution cylinder, from which smoothing of the ink application takes place via further application rollers.

A film inking system is represented in DE 101 03 842

A1, wherein an angle between a metering gap and a film gap, as well as an angle between the film gap and a press gap lies between 70° and 110°, in particular at approximately 90°.

DE 29 32 105 A1 shows a printing group with a vibrator inking system and a dampening system, wherein the dampening system is movably arranged in such a way that in one operating mode it acts as a three-roller dampening system, wherein no connection with the inking system exists, and in the other operating mode the dampening distribution cylinder

has contact with an application roller of the inking system.

A film inking system is known from DE 38 04 204 A1 wherein, in addition to a zoned metering of the ink flow arranged in one area of the ink fountain, it is possible to take ink from the inking system via an intermediate roller and a doctor blade arrangement for variable regulation or for cleaning purposes.

A distribution cylinder of a printing press is disclosed in DE 101 57 243 A1, whose rotatory drive mechanism is arranged on its one end, and a traversing drive mechanism on the other, for example the driven side. Rotatory driving is provided by the motor either axially directly, or via a pinion gear to a spur wheel of the cylinder.

Transfer rollers of an inking system are seated on spring-loaded support levers in DE 38 04 204 A1.

The object of the invention is based on producing rollers of an inking or dampening system, as well as an inking or dampening system with two rollers, which act together in the print-on position.

In accordance with the invention, this object is attained by means of the characteristics of claims 1 or 6 or 15.

In an advantageous embodiment, the ink from the first distribution cylinder reaches the forme cylinder selectively or simultaneously over different possible paths (in series or parallel) via two further distribution cylinders. By means of this the inking system can be very flexibly changed to printing conditions with different requirements. The same

applies to the printing group in view of the selective assignment of a distribution cylinder to the dampening or the inking system, as well as a possibility of a selection between "purely" dampening (direct) and indirect dampening, wherein ink and dampening agent are already mixed on a distribution cylinder.

Claims

1. A roller (329, 316, 321, 324) of an inking or dampening system (305, 306), which is axially movable by means of a traversing gear (374) and has, for being rotatorily driven, an individual rotatory drive mechanism (367, 368) embodied as a drive motor (367, 368), characterized in that the roller (329, 316, 321, 324) is seated, movable in a direction perpendicular in respect to its axis of rotation, and that the drive motor (367, 368) is arranged to be movable together with the roller (329, 316, 321, 324) which can be traversingly moved.

2. The roller (329, 316, 321, 324) in accordance with claim 1, characterized in that each end of the roller (329, 316, 321, 324) is seated in pivotable levers (364, 366), and that the drive motor (367, 368) is arranged on one of the levers (364, 366) and is pivotable together with the roller (329, 316, 321, 324) which can be traversingly moved.

3. The roller (329, 316, 321, 324) in accordance with claim 1, characterized in that the traversing gear (374) is arranged opposite the front of the roller (329, 316, 321, 324) for rotatory driving.

4. The roller (329, 316, 321, 324) in accordance with claim 1, characterized in that a coaxial drive shaft (376) of the rotatory drive mechanism is arranged fixed in place in

the axial direction, and coupling means (377) are provided, which assure a torque transfer from the drive shaft (376) to the roller body, but still permit an axial relative movement between the roller body and the drive shaft (376).

5. The roller (329, 316, 321, 324) in accordance with claim 1, characterized in that each end of the roller (329, 316, 321, 324) is seated in eccentric bushings, and the drive motor (367, 368) is arranged on one of the pivotable

eccentric bushings.

6. A roller (329, 316, 321, 324) of an inking or dampening system (305, 306), which is axially movable by means of a traversing gear (374) and can be rotated by means of a drive mechanism arranged on the oppositely located front end, characterized in that a coaxial drive shaft (376) of the rotatory drive mechanism is arranged fixed in place in the axial direction, and coupling means (377) are provided, which assure a torque transfer from the drive mechanism via the stationary drive shaft (376) to the roller body, but still permit an axial relative movement between the roller body and the drive shaft (376).

7. The roller (329, 316, 321, 324) in accordance with claim 1 or 6, characterized in that the rotatory drive mechanism is embodied as a drive motor (367, 369), which is mechanically independent of the remaining rollers or cylinders.

8. The roller (329, 316, 321, 324) in accordance with claim 1 or 6, characterized in that rotatory driving takes place via a corner or angle gear (369, 371).

9. The roller (329, 316, 321, 324) in accordance with claim 1 or 6, characterized in that rotatory driving takes place via an angle-compensating coupling (375).

10. The roller (329, 316, 321, 324) in accordance with claim 1 or 6, characterized in that the traversing drive mechanism (374) is arranged outside the roller body.

11. The roller (329, 316, 321, 324) in accordance with claim 1 or 6, characterized in that the traversing drive mechanism (374) is embodied as a gear (374) which creates an axial traversing movement from the rotatory movement.

12. The roller (329, 316, 321, 324) in accordance with claim 11, characterized in that the gear (374) in the form of

an open, not individually lubricated gear (374), together with at least one drive wheel (386, 387) of a printing group cylinder (303, 304), is arranged in a hollow space (356) embodied as a lubricant chamber (356).

13. The roller (329, 316, 321, 324) in accordance with claim 11, characterized in that the traversing drive mechanism (374) is embodied as a cam gear, and that a reduction gear is arranged between the roller (329, 316, 321, 324) and the rotating portion of the cam gear.

14. The roller (329, 316, 321, 324) in accordance with claim 14, characterized in that the gear member supporting the cam is arranged to be rotating during operations, and the gear member supporting the cooperating stop is arranged fixed in place on the frame.

15. An inking or dampening system (305, 306) with two rollers (329, 330), which work together in the print-on position, characterized in that the two rollers (329, 330) are arranged to be pivotable, and that the pivot shaft (S329) of the first roller (329) coincides with the axis of rotation of the second roller (330), characterized in that the front ends of each of the two rollers (329, 330) are pivotably seated in levers (364, 366), and that a pivot shaft (S329) of the lever (364) of the first roller (329) coincides with the axis of rotation of the second roller (330).

16. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that at least one of the two rollers (329, 330) is seated in eccentric bushings.

17. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that the levers (364) of the first roller (329) are hinged on the levers (366) of the second roller (330).

18. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that the lever

(364, 366) of the second roller (330) has an adjustable stop (365), by means of which it is supported in the contact position of the dampening system (306) on a stop (370) of the application roller (328), which works together with the roller (329).

19. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that an adjusting device is assigned to the second roller (330), which makes possible a diagonal displacement of its axis of rotation in relation to the axis of rotation of the first roller (329).

20. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that the first roller (329) is designed as a traversing roller (329) in accordance with one or several of claims 1 to 14.

21. The inking or dampening system (305, 306) in accordance with claim 15, characterized in that the second roller (330) has its own drive motor (368, 367) for rotatory driving.

22. The roller (329) in accordance with one or several of claims 1 to 14, or the inking or dampening system (305, 306) in accordance with one or several of claims 15 to 21, characterized in that the first roller (329, 316, 321, 324) is designed as a distribution roller (329) of a dampening

system (306).

23. The inking or dampening system (305, 306) in accordance with claims 15 to 22, characterized in that the second roller (330) is designed as a dipping roller (330) of a dampening system (306).